

**REMARKS-General**

1. The newly drafted independent claims 25 to 27 incorporate all structural limitations of the original claim 1 and include further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 25-27 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

**Response to Rejection of Claims 17-24 under 35USC103**

2. The Examiner rejected claims 17-24 over Nishio et al (US 6,437,502) in view of Ge et al (US 6,515,433) and in further view of Evans et al (US 4,145,634). Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained though the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

3. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

4. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Nishio et al which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Ge et al and/or Evans et al at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

5. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Nishio et al, are obvious in view of the supplemental cited arts, Ge et al and/or Evans et al, we have to identify all the differences between the claims of the instant inventions and Nishio et al. The applicant respectfully identifies the differences between the claims of the instant invention and Nishio et al as follows:

(a) In claims 25 to 27, "a light tube having a spiral-shaped light body and two end portions downwardly and integrally extended therefrom" is claimed to define the structure of the light tube, wherein Nishio et al merely teaches a plurality of U-shaped bent bulb 31 that each of the bulb 31 has a bent portion 31a and a pair of straight portions 31b integrally connected to the bent portion 31a.

(b) In claims 25 to 27, "the two end portions of the light tube are parallelly extended from the light body in a vertical extending manner" is claimed to define the structure of the end portion of the spiral shaped illuminable unit, wherein Nishio et al merely teaches the straight portion 31b of the U-shaped bent bulb 31 is longer than a height of the bent portion 31a thereof.

The applicant respectfully submits one of the main objectives of the instant invention is to minimize the height of the spiral illuminable unit by configuring the two end portions to parallelly extend from the spiral portion. However, the U-shaped bent bulb 31 taught by Nishio et al can be adjusted its height by simply reducing the length of the straight portion 31b. In other words, Nishio et al does not suggest any solution to reduce the overall height of the spiral illuminable unit.

(c) In claim claims 25 to 27, "a conductor enclosure having a length approximately equal to a length of the end portion of the light tube" is claimed to reduce the overall height of the spiral illuminable unit, wherein Nishio et al merely teaches the minute tube 41 sealed at the end of the straight portion 31b of the U-shaped bent bulb 31 without any mention of any dimensional relationship between the length of the minute tube 41 and the end of the straight portion 31b of the U-shaped bent bulb 31. As it is mentioned above, the objective of the instant invention is to minimize the height of the spiral illuminable unit such that the end portion of the light tube is extended vertically and is just long enough to receive the conductor enclosure. However, Nishio et al is

silent regarding the size between the minute tube 41 and the straight portion 31b of the U-shaped bent bulb 31 because the overall height of the U-shaped bent bulb 31 is NOT depend on the length of the minute tube 41 but the length of the straight portion 31b.

(d) In claim claims 25 to 27, "a bottom end of the respective end portion is mounted and sealed to the conductor enclosure at a position that an upper head portion of the conductor enclosure is coaxially received within the respective end portion of the light tube" is claimed to substantially reduce an overall height of the illuminable unit, wherein Nishio et al fails to teach and suggest how to reduce the overall height of the U-shaped bent bulb 31.

(e) In claim claims 25 to 27, "the conductor wire is extended through the conductor enclose within the respective end portion of the light tube" is claimed to retain the conductor wire in position via the conductor enclosure, wherein Nishio et al merely teaches the dumet wire 46 attached to the glass at the end of the U-shaped bent bulb 31 without any mention of any wire extending through the conductor enclosure to retain wire in position.

(f) In claim 25, Nishio et al fails to teach and suggest the mercury source is liquid mercury contained in the light tube.

(g) In claim 26, Nishio et al fails to teach and suggest the mercury source is amalgam contained in the light tube. Nishio et al merely teaches, in column 14, lines 30-32, "the minute tube 41 is designed such that it may be provided with an amalgam 42 if it is necessary" without any mention of any amalgam contained in the light tube.

(h) In claim 27, Nishio et al fails to teach and suggest the mercury source is amalgam integral with the light tube. Nishio et al merely teaches, in column 14, lines 40-42, "if it is necessary, one of the copper-weld wires 45 may be provided with an auxiliary amalgam 49" without any mention of any amalgam integral with the light tube.

6. Whether the claims 25 to 27 as amended of the instant invention are obvious depends on whether the above differences (a) to (h) between the instant invention and Nishio are obvious in view of Ge et al and/or Evans et al at the time of the invention was made.

7. Furthermore, the applicant respectfully submits that when applying 35 USC 103, the following tenets of patent law must be adhered to:

- (a) The claimed invention must be considered as a whole;
- (b) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (c) The references must be viewed without the benefit of hindsight vision afforded by the claimed invention; and
- (d) Reasonable expectation of success is the standard with which obviousness is determined.

Also, "The mere fact that a reference could be modified to produce the patented invention would not make the modification obvious unless it is suggested by the prior art." Libbey-Owens-Ford v. BOC Group, 4 USPQ 2d 1097, 1103 (DCNJ 1987).

8. Ge et al merely teaches a hot cathode fluorescent lamp comprises the electrodes 212 disposed at the end portions (not number) of the CCFL tube 1' and two wires 110 extended from the electrodes 212 without any mention of any conductor enclosure sealed at the end portions of the tube 1'. Neither Nishio et al nor Ge et al suggests an illuminable unit containing the above distinctive features (a) to (h) as claimed in the instant invention as well as any combination or possibility of providing a light tube having a spiral-shaped light body and two end portions downwardly and integrally extended therefrom in a vertical extending manner, and minimizing the overall height of the spiral illuminable unit by matching the length of the conductor enclosure with the height of the end portion of the light tube. That is, modifying the shape of tube taught by Nishio et al with the spiral tube of Ge et al, as proposed by the Examiner, would not provide a spiral illuminable unit having a minimized overall height by matching

the length of the conductor enclosure with the height of the end portion of the light tube and receiving the conductor enclosure within the end portion of the light tube.

9. Evans et al merely teaches a fluorescent lamp having an elongated tubular envelope 12 without any suggestion of how to place the liquid mercury in the spiral shaped light tube with two parallel end portions as claimed in the instant invention.

10. "To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited art references for combination in the manner claimed... [T]he suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness..." *In re Gorman*, 933 F.2d 982, 986, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991).

11. Accordingly, the applicant believes that neither Nishio et al, Ge et al, nor Evans et al, separately or in combination, suggests or makes any mention whatsoever of the difference subject features (a) to (h) as claimed in the amended claims 25 to 27 of the instant invention.

12. Applicant believes that for all of the foregoing reasons, all of the claims are in condition for allowance and such action is respectfully requested.

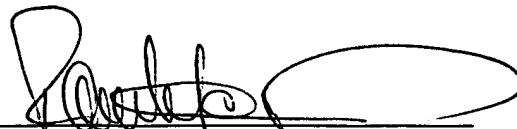
#### **The Cited but Non-Applied References**

13. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

14. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 25-27 at an early date is solicited.

15. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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